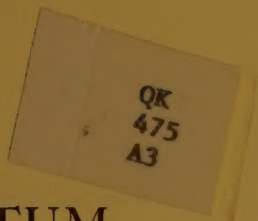


JOURNAL
OF THE
ARNOLD ARBORETUM
HARVARD UNIVERSITY



ALFRED REHDER
EDITOR

JOSEPH H. FAULL AND CLARENCE E. KOBUSKI
ASSOCIATE EDITORS

VOLUME XV



JAMAICA PLAIN, MASS.
1934.

Reprinted with the permission of the
Arnold Arboretum of Harvard University
KRAUS REPRINT CORPORATION
New York
1968

DATES OF ISSUE

- No. 1, (pp. 1-89, pl. 82-86) issued January 24, 1934.
No. 2, (pp. 91-161, pl. 87-90) issued April 20, 1934.
No. 3, (pp. 163-266, pl. 91-109) issued July 16, 1934.
No. 4, (pp. 267-389, pl. 110-118) issued October 25, 1934.

TABLE OF CONTENTS

NOTES ON THE LIGNEOUS PLANTS DESCRIBED BY LÉVEILLÉ FROM EASTERN ASIA. By <i>Alfred Rehder</i>	1
SPECIATION IN UVULARIA. With plates 82 and 83 and 5 text figures. By <i>Edgar Anderson</i> and <i>Thomas W. Whitaker</i>	28
A QUANTITATIVE COMPARISON OF SPECIFIC AND GENERIC DIFFERENCES IN THE BETULACEAE. With one text figure. By <i>Edgar Anderson</i> and <i>Ernst C. Abbe</i>	43
THE BIOLOGY OF MILESIA RUSTS. With plates 84-86. By <i>J. H. Faull</i> ..	50
A REMARKABLE SPRUCE RUST, PERIDERMIA PARKSIANUM, n. sp. By <i>J. H. Faull</i>	86
NOTES: THE BEACH PLUM IN MICHIGAN. By <i>Ernest J. Palmer</i> . — QUERCUS ELLIPSOIDALIS IN MISSOURI. By <i>Ernest J. Palmer</i>	88
NOTES ON THE LIGNEOUS PLANTS DESCRIBED BY LÉVEILLÉ FROM EASTERN ASIA. By <i>Alfred Rehder</i>	91
STUDIES IN THE GENUS FRAXINUS. A PRELIMINARY KEY TO WINTER TWIGS FOR THE SECTIONS MELIOIDES AND BUMELIOIDES. With plates 87-89 and 2 text figures. By <i>C. M. Whelden</i>	118
NOTES ON SOME PLANTS OF OKLAHOMA. By <i>Ernest J. Palmer</i>	127
CHROMOSOME CONSTITUTION IN CERTAIN MONOCOTYLEDONS. With 9 text figures. By <i>Thomas W. Whitaker</i>	135
THE OCCURRENCE OF TUMORS ON CERTAIN NICOTIANA HYBRIDS. With plate 90 and 1 text figure. By <i>Thomas W. Whitaker</i>	144
NOTES: BLISTER RUST OF PINUS LONGIFOLIA (Review). By <i>J. H. Faull</i> . — WEHMEYER'S "THE GENUS DIAPORTHE NITSCHKE AND ITS SEGREGATES" (Review). By <i>J. H. Faull</i>	154
THE HOSTS, LIFE HISTORY AND CONTROL OF THE CEDAR-APPLE RUST FUNGUS, GYMNOSPORANGIUM JUNIPERI-VIRGINIANAE SCHW. With two text figures and plates 91-98. By <i>Ivan H. Crowell</i>	163
THE CAMBIUM AND ITS DERIVATIVE TISSUES. NO. IX. STRUCTURAL VARIABILITY IN THE REDWOOD, SEQUOIA SEMPERVIRENS, AND ITS SIGNIFICANCE IN THE IDENTIFICATION OF FOSSIL WOODS. With one text figure and plates 99-106. By <i>I. W. Bailey</i> and <i>Anna F. Faull</i>	233
CHROMOSOMES OF THE CYCADALES. With plates 107 and 108. By <i>Karl Sax</i> and <i>J. M. Beal</i>	255
THE SEVENTH CENTURY OF THE RELIQUIAE FARLOWIANAE. DISTRIBUTED BY THE FARLOW HERBARIUM OF HARVARD UNIVERSITY. With plate 109. By <i>David H. Linder</i>	259
NOMENCLATURE PRIORITY IN THE UREDINALES. By <i>J. C. Arthur</i> ..	263
NOTES: TREES OF THE SOUTHEASTERN STATES. (Review.) By <i>E. J. Palmer</i>	266
NOTES ON THE LIGNEOUS PLANTS DESCRIBED BY LÉVEILLÉ FROM EASTERN ASIA. By <i>Alfred Rehder</i>	267
THE CAMBIUM AND ITS DERIVATIVE TISSUES. NO. X. STRUCTURE, OPTICAL PROPERTIES AND CHEMICAL COMPOSITION OF THE SO-CALLED MIDDLE LAMELLA. With two text figures and plates 110-113. By <i>Thomas Kerr</i> and <i>I. W. Bailey</i>	327

TABLE OF CONTENTS

A VERIFICATION OF THE OCCURRENCE OF <i>YUCCA WHIPPLEI</i> IN ARIZONA. With plates 114-117. By <i>Susan D. McKelvey</i>	350
A KARYO-SYSTEMATIC STUDY OF <i>ROBINIA</i> . With one text figure. By <i>Thomas W. Whitaker</i>	353
A CULTURE CHAMBER FOR THE STUDY OF MYCORRHIZAE. With two text figures and plate 118. By <i>A. B. Hatch</i>	358
THE ARNOLD ARBORETUM DURING THE FISCAL YEAR ENDED JUNE 30, 1934; The Arboretum; The Pathological Laboratory; The Cytogenetic Laboratory; The Herbarium; The Library; Bibliography of the published writings of the staff and students, July 1, 1933—June 30, 1934	366
STAFF OF THE ARNOLD ARBORETUM 1933-1934	376
ERRATA AND ADDENDA	377
INDEX	378